

INDEX

A

	PAGE
ADAMS, N. D., Discussion on Criteria for Industrial Exhaust Systems	365
ADLER, A. A., Discussions on Thermodynamic Properties of Moist Air	213
Corrosion Studies in Steam Heating Systems	261
Air Conditioning in Its Relation to Human Welfare	300
Engineering in the Hospital of Tomorrow	316
Air Circulation, Heat Transfer from Direct and Extended Surfaces with Forced, by G. L. TUVE AND C. A. McKEEMAN	427
Discussion	442
Air Conditioned Room and the Relationship Between the Pollen Content of Out- door Air and Weather Conditions, Observations of Hay Fever Sufferers in, by T. A. KENDALL AND GARLAND WEIDNER	229
Discussion	250
Air Conditioning for a Small Residence, Low-Cost, by M. K. DREWRY.....	137
Air Conditioning in Its Relation to Human Welfare, by C. A. MILLS.....	289
Discussion	299
Air Conditioning Investigations, A Proving Home for, by ELLIOTT HARRINGTON AND LEON A. MEARS	119
Discussion	135
Air Conditioning System Compared with Design Figures, Operating Results of an, by JOHN R. HERTZLER	401
Discussion	411
Air Conditioning System of the New Metropolitan Building—First Summer's Experience, The, by W. J. McCONNELL AND I. B. KAGEY	217
Air Conditioning, What Is the Cooling Load Factor in, by JOHN EVERETTS, JR.	461
Air, Diurnal and Seasonal Variations in Small-Ion Content of Outdoor and Indoor, by C. P. YAGLOU AND L. CLARIBEL BENJAMIN	271
Discussion	287
Air, Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess, by L. E. SEELEY AND E. J. TAVANLAR	319
Discussion	327
Air, Thermodynamic Properties of Moist, by JOHN A. GOFF	199
Discussion	213
ALT, H. L., Discussion on Heating Buildings with Hot Water	65
ANGUS, H. H., Discussion on Engineering in the Hospital of Tomorrow	317
Annual Meeting, 1934, Fortieth	1
ASHLEY, C. M., Discussion on Studies of Solar Radiation Through Bare and Shaded Windows	117, 118
A.S.H.V.E. Standard Code for Testing and Rating Return Line Low Vacuum Heating Pumps	33
Attic Ventilating Fans, Comfort Cooling with, by G. B. HELMRICH AND G. H. TUTTLE	155
Discussion	164
Automatic Controls for Forced-Air Heating Systems, by S. KONZO AND A. F. HUBBARD	37
Discussion	53

B

	PAGE
BEALS, A. E., Discussion on Dry-Bulb vs. Effective Temperature Control	375
BEALS, A. E., Dry-Bulb vs. Effective Temperature Control	367
Discussion	374
BENDER, H. C., Discussion on Comfort Cooling with Attic Ventilating Fans ...	165
BENJAMIN, L. CLARIBEL, AND YAGLOU, C. P., Diurnal and Seasonal Variations in Small-Ion Content of Outdoor and Indoor Air	271
Discussion	287
BLACKSHAW, J. L., AND HOUGHTEN, F. C., Radiation of Energy Through Glass	93
Discussion	98
BLACHSHAW, J. L., GUTBERLET, CARL, AND HOUGHTEN, F. C., Wind Velocities Near a Building and Their Effect on Heat Loss	387
Discussion	399
BLACKSHAW, J. L., HOUGHTEN, F. C., AND GUTBERLET, CARL, Studies of Solar Radiation Through Bare and Shaded Windows	101
Discussion	116
BLOOMFIELD, J. J., Criteria for Industrial Exhaust Systems	353
Discussion	365
BLOOMFIELD, J. J., Discussion on Criteria for Industrial Exhaust Systems	365
Boilers, Design and Valuation of Cast Iron Domestic Heating, by C. W. BRABBÉE	333
Discussion	346
BRABBÉE, C. W., Design and Valuation of Cast Iron Domestic Heating Boilers .	333
Discussion	346
BRABBÉE, C. W., Discussion on Design and Valuation of Cast Iron Domestic Heating Boilers	346
BRACKEN, J. H., Discussion on Insulating Value of Bright Metallic Surfaces ..	420
BRODERICK, E. L., KRATZ, A. P., AND FAHNESTOCK, M. K., Factors Affecting the Heat Output of Convectors	443
Discussion	460
Burners in Relation to Excess Air, Study of Fuel Burning Rates and Power Requirements of Oil, by L. E. SEELEY AND E. J. TAVANLAR	319
Discussion	327
BURT, B. F., AND LEWIS, S. R., Heating Buildings with Hot Water	55
Discussion	65
BURT, B. F., Discussion on Heating Buildings with Hot Water	66

C

CAMPBELL, E. K., Discussions on Automatic Controls for Forced-Air Heating Systems	53
Comfort Cooling with Attic Ventilating Fans	165
Carbon Monoxide Surveys of Two Garages	270
CAMPBELL, E. K., FARBER, L. M., AND SLUSS, A. H., Carbon Monoxide Surveys of Two Garages	263
Discussion	270
Carbon Monoxide Surveys of Two Garages, by A. H. SLUSS, E. K. CAMPBELL AND L. M. FARBER	263
Discussion	270
CARRIER, W. H., Discussions on Study of Fuel Burning Rates and Power Re- quirements of Oil Burners in Relation to Excess Air	329
Design and Valuation of Cast Iron Domestic Heating Boilers	346
Circulation, Heat Transfer from Direct and Extended Surfaces with Forced Air, by G. L. TUVE AND C. A. McKEEMAN	427
Discussion	442

	PAGE
CLOSE, P. D., Discussions on Selecting Temperatures and Wind Velocities for Calculating Heating Losses	92
Insulating Value of Bright Metallic Surfaces	420
CLOSE, P. D., Selecting Temperatures and Wind Velocities for Calculating Heating Losses	77
Discussion	90
Code for Testing and Rating Return Line Low Vacuum Heating Pumps, A.S.H.V.E. Standard	33
Comfort Cooling with Attic Ventilating Fans, by G. B. HELMRICH AND G. H. TUTTLE	155
Discussion	164
Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditioning, Observations of Hay Fever Sufferers in Air, by T. A. KENDAL AND GARLAND WEIDNER	229
Discussion	250
Conditioning for a Small Residence, Low-Cost Air, by M. K. DREWRY	137
Conditioning in Its Relation to Human Welfare, Air, by C. A. MILLS	289
Discussion	299
Conditioning Investigations, A Proving Home for Air, by ELLIOTT HARRINGTON AND LEON A. MEARS	119
Discussion	135
Conditioning System Compared with Design Figures, Operating Results of an Air, by JOHN R. HERTZLER	401
Discussion	411
Conditioning, What Is the Cooling Load Factor in Air, by JOHN EVERETTS, JR.	461
Control, Dry-Bulb vs. Effective Temperature, by A. E. BEALS	367
Discussion	374
Controls for Forced-Air Heating Systems, Automatic, by S. KONZO AND A. F. HUBBARD	37
Discussion	53
Convectors, Factors Affecting the Heat Output of, by A. P. KRATZ, M. K. FAHNESTOCK AND E. L. BRODERICK	4
Discussion	465
COOK, R. P., Discussions on Criteria for Industrial Exhaust Systems	365
Insulating Value of Bright Metallic Surfaces	424
Cooling in the Research Residence for the Summer of 1933, Study of Summer, by A. P. KRATZ AND S. KONZO	167
Discussion	194
Cooling Load Factor in Air Conditioning, What Is the, by JOHN EVERETTS, JR.	461
Cooling with Attic Ventilating Fans, Comfort, by G. B. HELMRICH AND G. H. TUTTLE	155
Discussion	164
Corrosion Studies in Steam Heating Systems, by R. R. SEEGER, F. A. ROHRMAN AND G. E. SMEDBERG	253
Discussion	259
Criteria for Industrial Exhaust Systems, by J. J. BLOOMFIELD	353
Discussion	365

D

DAVIES, CHARLES, Discussion on Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditions	251, 252
Design and Equipment of the Pierce Laboratory, by C.-E. A. WINSLOW, LEONARD GREENBURG, L. P. HERRINGTON AND H. G. ULLMAN	67
Design and Valuation of Cast Iron Domestic Heating Boilers, by C. W. BRABBÉE	333
Discussion	346

	PAGE
Design Figures, Operating Results of an Air Conditioning System Compared with, by JOHN R. HERTZLER	401
Discussion	411
Diurnal and Seasonal Variations in Small-Ion Content of Outdoor and Indoor Air, by C. P. YAGLOU AND L. CLARIBEL BENJAMIN	271
Discussion	287
Domestic Heating Boilers, Design and Valuation of Cast Iron, by C. W. BRABBÉE	333
Discussion	346
DREWRY, M. K., Low-Cost Air Conditioning for a Small Residence	137
DRISCOLL, W. H., Discussion on Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air	329, 330
Dry-Bulb vs. Effective Temperature Control, by A. E. BEALS	367
Discussion	374
DUGAN, T. M., Discussion on Corrosion Studies in Steam Heating Systems ...	262

E

Engineering in the Hospital of Tomorrow, by CHARLES F. NEERGAARD	303
Discussion	315
EVANS, E. C., Discussion on Studies of Solar Radiation Through Bare and Shaded Windows	118
EVERETTS, JR., JOHN, Discussion on Study of Summer Cooling in the Research Residence for the Summer of 1933	197, 198
EVERETTS, JR., JOHN, What Is the Cooling Load Factor in Air Conditioning...	461
Exhaust Systems, Criteria for Industrial, by J. J. BLOOMFIELD	353
Discussion	365

F

Factors Affecting the Heat Output of Convectors, by A. P. KRATZ, M. K. FAHNESTOCK AND E. L. BRODERICK	443
Discussion	460
FAHNESTOCK, M. K., BRODERICK, E. L., AND KRATZ, A. P., Factors Affecting the Heat Output of Convectors	443
Discussion	460
FAHNESTOCK, M. K., Discussions on Insulating Value of Bright Metallic Surfaces	424
Heat Transfer from Direct and Extended Surfaces with Forced Air Circulation	442
Fans, Comfort Cooling with Attic Ventilating, by G. B. HELMRICH AND G. H. TUTTLE	155
Discussion	164
FARRER, L. M., SLUSS, A. H., AND CAMPBELL, E. K., Carbon Monoxide Surveys of Two Garages	263
Discussion	270
FARNHAM, ROSWELL, Discussion on Automatic Controls for Forced-Air Heating Systems	53, 54
FLEISHER, W. L., Discussions on Selecting Temperatures and Wind Velocities for Calculating Heating Losses	91, 92
Thermodynamic Properties of Moist Air	214
Air Conditioning in Its Relation to Human Welfare	300, 301
Design and Valuation of Cast Iron Domestic Heating Boilers	346
Forced Air Circulation, Heat Transfer from Direct and Extended Surfaces with, by G. L. TUVE AND C. A. MCKEEMAN	427
Discussion	442

	PAGE
Forced-Air Heating Systems, Automatic Controls for, by S. KONZO AND A. F. HUBBARD	37
Discussion	53
Fortieth Annual Meeting, 1934	1
Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air, Study of, by L. E. SEELEY AND E. J. TAVANLAR	319
Discussion	327

G

Garages, Carbon Monoxide Surveys of Two, by A. H. SLUSS, E. K. CAMPBELL AND L. M. FARBER	263
Discussion	270
Glass, Radiation of Energy Through, by J. L. BLACKSHAW AND F. C. HOUGHTEN	93
Discussion	98
GOFF, J. A., Discussion on Thermodynamic Properties of Moist Air	215
GOFF, J. A., Thermodynamic Properties of Moist Air	199
Discussion	213
GOVAN, JAMES, Discussion on Engineering in the Hospital of Tomorrow	315
GREENBURG, LEONARD, Discussion on Air Conditioning in Its Relation to Human Welfare	301
GREENBURG, LEONARD, HERRINGTON, L. P., ULLMAN, H. G., AND WINSLOW, C.-E. A., Design and Equipment of the Pierce Laboratory	67
GUTBERLET, CARL, BLACKSHAW, J. L., AND HOUGHTEN, F. C., Studies of Solar Radiation Through Bare and Shaded Windows	101
Discussion	116
GUTBERLET, CARL, HOUGHTEN, F. C., AND BLACKSHAW, J. L., Wind Velocities Near a Building and Their Effect on Heat Loss	387
Discussion	399

H

HARDING, L. A., Discussion on Insulating Value of Bright Metallic Surfaces ..	424
HARRINGTON, ELLIOTT, AND MEARS, LEON A., A Proving Home for Air Conditioning Investigations	119
Discussion	135
HARRINGTON, ELLIOTT, Discussion on A Proving Home for Air Conditioning Investigations	136
Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditions, Observations of, by T. A. KENDALL AND GARLAND WEIDNER	229
Discussion	250
Heating Boilers, Design and Valuation of Cast Iron Domestic, by C. W. BRABBÉE	333
Discussion	346
Heating Buildings with Hot Water, by B. F. BURT AND S. R. LEWIS	55
Discussion	65
Heating Losses, Selecting Temperatures and Wind Velocities for Calculating, by P. D. CLOSE	77
Discussion	90
Heating Systems, Automatic Controls for Forced-Air, by S. KONZO AND A. F. HUBBARD	37
Discussion	53
Heating Systems, Corrosion Studies in Steam, by R. R. SEEBER, F. A. ROHRMAN AND G. E. SMEDBERG	253
Discussion	259
Heat Loss in Tall Buildings, Influence of Stack Effect on the, by AXEL MARIN ..	377

	PAGE
Heat Loss, Wind Velocities Near a Building and Their Effect on, by F. C. HOUGHTEN, J. L. BLACKSHAW AND CARL GUTBERLET	387
Discussion	399
Heat Output of Convectors, Factors Affecting the, by A. P. KRATZ, M. K. FAHNSTOCK AND E. L. BRODERICK	443
Discussion	460
Heat Transfer from Direct and Extended Surfaces with Forced Air Circulation, by G. L. TUVE AND C. A. McKEEMAN	427
Discussion	442
HECHLER, F. G., Discussion on Radiation of Energy Through Glass	98
HELMRICH, G. B., AND TUTTLE, G. H., Comfort Cooling with Attic Ventilating Fans	155
Discussion	164
HELMRICH, G. B., Discussions on Comfort Cooling with Attic Ventilating Fans	165
Study of Summer Cooling in the Research Residence for the Summer of 1933	195
HERRINGTON, L. P., ULLMAN, H. G., WINSLOW, C.-E. A., AND GREENBURG, LEONARD, Design and Equipment of the Pierce Laboratory	67
HERTZLER, J. R., Discussion on Operating Results of an Air Conditioning System Compared with Design Figures	411
HERTZLER, J. R., Operating Results of an Air Conditioning System Compared with Design Figures	401
Discussion	411
Home for Air Conditioning Investigations, A Proving, by ELLIOTT HARRINGTON AND LEON A. MEARS	119
Discussion	135
Hospital of Tomorrow, Engineering in the, by CHARLES F. NEERGAARD	303
Discussion	315
Hot Water, Heating Buildings with, by B. F. BURT AND S. R. LEWIS	55
Discussion	65
HOUGHTEN, F. C., AND BLACKSHAW, J. L., Radiation of Energy Through Glass	93
Discussion	98
HOUGHTEN, F. C., BLACKSHAW, J. L., AND GUTBERLET, CARL, Wind Velocities Near a Building and Their Effect on Heat Loss	387
Discussion	399
HOUGHTEN, F. C., Discussions on Studies of Solar Radiation Through Bare and Shaded Windows	116, 117, 118
Dry-Bulb vs. Effective Temperature Control	374
HOUGHTEN, F. C., GUTBERLET, CARL, AND BLACKSHAW, J. L., Studies of Solar Radiation Through Bare and Shaded Windows	101
Discussion	116
HUBBARD, A. F., AND KONZO, S., Automatic Controls for Forced-Air Heating Systems	37
Discussion	53
I	
Indoor Air, Diurnal and Seasonal Variations in Small-Ion Content of Outdoor and, by C. P. YAGLOU AND L. CLARIBEL BENJAMIN	271
Discussion	287
Industrial Exhaust Systems, Criteria for, by J. J. BLOOMFIELD	353
Discussion	365
Influence of Stack Effect on the Heat Loss in Tall Buildings, by AXEL MARIN	377
INGELS, MARGARET, Discussion on Air Conditioning in Its Relation to Human Welfare	299
In Memoriam	468
Insulating Value of Bright Metallic Surfaces, by F. B. ROWLEY	413
Discussion	420

J

JACOBUS, D. S., Discussion on Thermodynamic Properties of Moist Air	PAGE 214, 215
JONES, H. B., Discussion on Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditions	251, 252

K

KAGEY, I. B., AND MCCONNELL, W. J., The Air Conditioning System of the New Metropolitan Building—First Summer's Experience	217
KENDALL, T. A., AND WEIDNER, GARLAND, Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditions	229
Discussion	250
KONZO, S., AND HUBBARD, A. F., Automatic Controls for Forced-Air Heating Systems	37
Discussion	53
KONZO, S., AND KRATZ, A. P., Study of Summer Cooling in the Research Residence for the Summer of 1933	167
Discussion	194
KONZO, S., Discussions on Automatic Controls for Forced-Air Heating Systems	53, 54
Study of Summer Cooling in the Research Residence for the Summer of 1933	197, 198
KRATZ, A. P., AND KONZO, S., Study of Summer Cooling in the Research Residence for the Summer of 1933	167
Discussion	194
KRATZ, A. P., Discussions on A Proving Home for Air Conditioning Investigations	135
Study of Summer Cooling in the Research Residence for the Summer of 1933	194
KRATZ, A. P., FAHNSTOCK, M. K., AND BRODERICK, E. L., Factors Affecting the Heat Output of Convectors	443
Discussion	460

L

LARSON, G. L., Discussion on Corrosion Studies in Steam Heating Systems ...	261
LEOPOLD, C. S., Discussion on Air Conditioning in Its Relation to Human Welfare	300
LEWIS, S. R., AND BURT, B. F., Heating Buildings with Hot Water	55
Discussion	65
LEWIS, THORNTON, Discussion on Air Conditioning in Its Relation to Human Welfare	299
Load Factor in Air Conditioning, What Is the Cooling, by JOHN EVERETTS, JR.	461
Low-Cost Air Conditioning for a Small Residence, by M. K. DREWRY	137

M

MARIN, AXEL, Influence of Stack Effect on the Heat Loss in Tall Buildings ...	377
MCCONNELL, W. J., AND KAGEY, I. B., The Air Conditioning System of the New Metropolitan Building—First Summer's Experience	217
MCCONNELL, W. J., Discussion on Air Conditioning in Its Relation to Human Welfare	299
MCINTOSH, F. C., Discussion on Dry-Bulb vs. Effective Temperature Control ..	375
MCKEEMAN, C. A., AND TUVE, G. L., Heat Transfer from Direct and Extended Surfaces with Forced Air Circulation	427
Discussion	442

	PAGE
McKEEMAN, C. A., Discussion on Heat Transfer from Direct and Extended Surfaces with Forced Air Circulation	442
McLENNAN, D. W., Discussion on Operating Results of an Air Conditioning System Compared with Design Figures	411
MEARS, LEON A., AND HARRINGTON, ELLIOTT, A Proving Home for Air Conditioning Investigations	119
Discussion	135
MEMORIAM, IN	468
MENSING, F. D., Discussion on Studies of Solar Radiation Through Bare and Shaded Windows	118
Metallic Surfaces, Insulating Value of Bright, by F. B. ROWLEY	413
Discussion	420
Metropolitan Building—First Summer's Experience, The Air Conditioning System of the New, by W. J. McCONNELL AND I. B. KAGEY	217
MILLER, R. A., Discussions on Radiation of Energy Through Glass	99
Studies of Solar Radiation Through Bare and Shaded Windows	117, 118
MILLER, R. T., Discussion on Insulating Value of Bright Metallic Surfaces	424
MILLS, C. A., Air Conditioning in Its Relation to Human Welfare	289
Discussion	299
MILLS, C. A., Discussions on Diurnal and Seasonal Variations in Small-Ion Content of Outdoor and Indoor Air	287
Air Conditioning in Its Relation to Human Welfare	301
MOELTER, F. J., Discussion on Study of Summer Cooling in the Research Residence for the Summer of 1933	197
MURPHY, H. C., Discussion on Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditions	250

N

NEERGAARD, CHARLES F., Discussion on Engineering in the Hospital of Tomorrow	317
NEERGAARD, CHARLES F., Engineering in the Hospital of Tomorrow	303
Discussion	315
NELSON, D. W., Discussion on Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air	327
NORTHON, LOUIS, Discussion on Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air	331

O

Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditions, by T. A. KENDALL AND GARLAND WEIDNER	229
Discussion	250
Oil Burners in Relation to Excess Air, Study of Fuel Burning Rates and Power Requirements of, by L. E. SEELEY AND E. J. TAVANLAR	319
Discussion	327
OLSON, G. E., Discussion on Comfort Cooling with Attic Ventilating Fans	165
Operating Results of an Air Conditioning System Compared with Design Figures, by JOHN R. HERTZLER	401
Discussion	411
Outdoor Air and Weather Conditions, Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of, by T. A. KENDALL AND GARLAND WEIDNER	229
Discussion	250

	PAGE
Outdoor and Indoor Air, Diurnal and Seasonal Variations in Small-Ion Content of, by C. P. YAGLOU AND L. CLARIBEL BENJAMIN	271
Discussion	287
Output of Convectors, Factors Affecting the Heat, by A. P. KRATZ, M. K. FAHNESTOCK AND E. L. BRODERICK	443
Discussion	460

P

Pierce Laboratory, Design and Equipment of the, by C.-E. A. WINSLOW, LEONARD GREENBURG, L. P. HERRINGTON AND H. G. ULLMAN	67
Pollen Content of Outdoor Air and Weather Conditions, Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the, by T. A. KENDALL AND GARLAND WEIDNER	229
Discussion	250
Power Requirements of Oil Burners in Relation to Excess Air, Study of Fuel Burning Rates and, by L. E. SEELEY AND E. J. TAVANLAR	319
Discussion	327
Program, 40th Annual Meeting	32
Semi-Annual Meeting, 1934	351
Properties of Moist Air, Thermodynamic, by JOHN A. GOFF	199
Discussion	213
Proving Home for Air Conditioning Investigations, A, by ELLIOTT HARRINGTON AND LEON A. MEARS	119
Discussion	135
Pumps, A.S.H.V.E. Standard Code for Testing and Rating Return Line Low Vacuum Heating	33

Q

QUEER, E. R., Discussions on Radiation of Energy Through Glass	98
Insulating Value of Bright Metallic Surfaces	422

R

Radiation of Energy Through Glass, by J. L. BLACKSHAW AND F. C. HOUGHTEN	93
Discussion	98
Radiation Through Bare and Shaded Windows, Studies of Solar, by F. C. HOUGHTEN, CARL GUTBERLET AND J. L. BLACKSHAW	101
Discussion	116
RANDALL, W. C., Discussion on Wind Velocities Near a Building and Their Effect on Heat Loss	399
Research Residence for the Summer of 1933, Study of Summer Cooling in the, by A. P. KRATZ AND S. KONZO	167
Discussion	194
ROHRMAN, F. A., SMEDBERG, G. E., AND SEEGER, R. R., Corrosion Studies in Steam Heating Systems	253
Discussion	259
ROWLEY, F. B., Discussions on Insulating Value of Bright Metallic Surfaces ..	426
Heat Transfer from Direct and Extended Surfaces with Forced Air Circulation	442
Factors Affecting the Heat Output of Convectors	460
ROWLEY, F. B., Insulating Value of Bright Metallic Surfaces	413
Discussion	420

S

	PAGE
Seasonal Variations in Small-Ion Content of Outdoor and Indoor Air, Diurnal and, by C. P. YAGLOU AND L. CLARIBEL BENJAMIN	271
Discussion	287
SEEBER, R. R., ROHRMAN, F. A., AND SMEDBERG, G. E., Corrosion Studies in Steam Heating Systems	253
Discussion	259
SEELEY, L. E., AND TAVANLAR, E. J., Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air	319
Discussion	327
Selecting Temperatures and Wind Velocities for Calculating Heating Losses, by P. D. CLOSE	77
Discussion	90
Semi-Annual Meeting, 1934	347
SHAVER, W. W., Discussion on Radiation of Energy Through Glass	100
SLUSS, A. H., CAMPBELL, E. K., AND FARBER, L. M., Carbon Monoxide Surveys of Two Garages	263
Discussion	270
Small-Ion Content of Outdoor and Indoor Air, Diurnal and Seasonal Variations in, by C. P. YAGLOU AND L. CLARIBEL BENJAMIN	271
Discussion	287
SMEDBERG, G. E., SEEBER, R. R., AND ROHRMAN, F. A., Corrosion Studies in Steam Heating Systems	253
Discussion	259
SNOW, H. A., Discussion on Heating Buildings with Hot Water	65
Solar Radiation Through Bare and Shaded Windows, Studies of, by F. C. HOUGHTEN, CARL GUTBERLET AND J. L. BLACKSHAW	101
Discussion	116
Stack Effect on the Heat Loss in Tall Buildings, Influence of, by AXEL MARIN	377
Steam Heating Systems, Corrosion Studies in, by R. R. SEEBER, F. A. ROHRMAN AND G. E. SMEDBERG	253
Discussion	259
Studies of Solar Radiation Through Bare and Shaded Windows, by F. C. HOUGHTEN, CARL GUTBERLET AND J. L. BLACKSHAW	101
Discussion	116
Studies in Steam Heating Systems, Corrosion, by R. R. SEEBER, F. A. ROHRMAN AND G. E. SMEDBERG	253
Discussion	259
Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air, by L. E. SEELEY AND E. J. TAVANLAR	319
Discussion	327
Study of Summer Cooling in the Research Residence for the Summer of 1933, by A. P. KRATZ AND S. KONZO	167
Discussion	194
Summer Cooling in the Research Residence for the Summer of 1933, Study of, by A. P. KRATZ AND S. KONZO	167
Discussion	194
Surfaces, Insulating Value of Bright Metallic, by F. B. ROWLEY	413
Discussion	420
Surfaces with Forced Air Circulation, Heat Transfer from Direct and Extended, by G. L. TUVE AND C. A. McKEEMAN	427
Discussion	442
SVENSON, E. B., Discussion on Insulating Value of Bright Metallic Surfaces ..	425
System Compared with Design Figures, Operating Results of an Air Conditioning, by JOHN R. HERTZLER	401
Discussion	411

	PAGE
System of the New Metropolitan Building—First Summer's Experience, The Air Conditioning, by W. J. McCONNELL AND I. B. KAGEY	217
Systems, Automatic Controls for Forced-Air Heating, by S. KONZO AND A. F. HUBBARD	37
Discussion	53
Systems, Corrosion Studies in Steam Heating, by R. R. SEEBER, F. A. ROHRMAN AND G. E. SMEDBERG	253
Discussion	259
Systems, Criteria for Industrial Exhaust, by J. J. BLOOMFIELD	353
Discussion	365

T

TAVANLAR, E. J., AND SEELEY, L. E., Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air	319
Discussion	327
TAVANLAR, E. J., Discussion on Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air	330
Temperature Control, Dry-Bulb vs. Effective, by A. E. BEALS	367
Discussion	374
Temperatures and Wind Velocities for Calculating Heating Losses, Selecting, by P. D. CLOSE	77
Discussion	90
Testing and Rating Return Line Low Vacuum Heating Pumps, A.S.H.V.E. Standard Code for	33
Thermodynamic Properties of Moist Air, by JOHN A. GOFF	199
Discussion	213
TIMMIS, W. W., Discussions on Automatic Controls for Forced-Air Heating Systems	53
Wind Velocities Near a Building and Their Effect on Heat Loss	270
Transfer from Direct and Extended Surfaces with Forced Air Circulation, Heat, by G. L. TUVE AND C. A. McKEEMAN	427
Discussion	442
TURLAND, C. H., Discussions on Automatic Controls for Forced-Air Heating Systems	53
Engineering in the Hospital of Tomorrow	317
TUTTLE, G. H., AND HELMRICH, G. B., Comfort Cooling with Attic Ventilating Fans	155
Discussion	164
TUVE, G. L., AND McKEEMAN, C. A., Heat Transfer from Direct and Extended Surfaces with Forced Air Circulation	427
Discussion	442

U

ULLMAN, H. G., WINSLOW, C.-E. A., GREENBURG, LEONARD, AND HERRINGTON, L. P., Design and Equipment of the Pierce Laboratory	67
--	----

V

Vacuum Heating Pumps, A.S.H.V.E. Standard Code for Testing and Rating Return Line Low	33
Velocities Near a Building and Their Effect on Heat Loss, Wind, by F. C. HOUGHTEN, J. L. BLACKSHAW AND CARL GUTBERLET	387
Discussion	399
Ventilating Fans, Comfort Cooling with Attic, by G. B. HELMRICH AND G. H. TUTTLE	155
Discussion	164

W

	PAGE
WALKER, J. H., Discussions on Comfort Cooling with Attic Ventilating Fans ..	164
Study of Summer Cooling in the Research Residence for the Summer of 1933	196, 197
Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditions	252
Corrosion Studies in Steam Heating Systems	259, 261
WALKER, W. K., Discussion on Study of Fuel Burning Rates and Power Requirements of Oil Burners in Relation to Excess Air	328
Water, Heating Buildings with Hot, by B. F. BURT AND S. R. LEWIS	55
Discussion	65
Weather Conditions, Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and, by T. A. KENDALL AND GARLAND WEIDNER	229
Discussion	250
WEIDNER, GARLAND, AND KENDALL, T. A., Observations of Hay Fever Sufferers in Air Conditioned Room and the Relationship Between the Pollen Content of Outdoor Air and Weather Conditions	229
Discussion	250
WEST, PERRY, Discussions on Automatic Controls for Forced-Air Heating System	53
Heating Buildings with Hot Water	65
What Is the Cooling Load Factor in Air Conditioning, by JOHN EVERETTS, JR.	461
WILLARD, A. C., Selecting Temperatures and Wind Velocities for Calculating Heating Losses	90
WINANS, G. D., Discussion on Wind Velocities Near a Building and Their Effect on Heat Loss	399
Wind Velocities for Calculating Heating Losses, Selecting Temperatures and, by P. D. CLOSE	77
Discussion	90
Wind Velocities Near a Building and Their Effect on Heat Loss, by F. C. HOUGHTEN, J. L. BLACKSHAW AND CARL GUTBERLET	387
Discussion	399
WINSLOW, C.-E. A., Discussions on Diurnal and Seasonal Variations in Small-Ion Content of Outdoor and Indoor Air	287
Air Conditioning in its Relation to Human Welfare	299
WINSLOW, C.-E. A., GREENBURG, LEONARD, HERRINGTON, L. P., AND ULLMAN, H. G., Design and Equipment of the Pierce Laboratory	67

Y

YAGLOU, C. P., AND BENJAMIN, L. CLARIBEL, Diurnal and Seasonal Variations in Small-Ion Content of Outdoor and Indoor Air	271
Discussion	287
YAGLOU, C. P., Discussion on Air Conditioning in Its Relation to Human Welfare	299

